Thermal characteristics of volatile substances. (Cont.)

96-7-8/25

given in Fig. 2 which shows that only the hydrogen content has a common curve for all the types of fuel. The oxygen content of anthracites and hard coals increases progressively with increase in the volatiles content over the whole range of values experienced. However, the hydrogen content, which has the highest calorific value of all the components increases only up to a volatiles content of about 10% and beyond 15% it remains practically constant. On the basis of the considerations which are adduced a diagram is drawn in Fig. 3 of the change in the elementary composition of the hot mass of fuels of humus origin and the distribution of the elements between the solids and volatiles as functions of the volatiles content (for low sulphur fuels). There are 3 figures, and 2 references, 1 of which is Slavic.

Card 4/4

ASSOCIATION: Giprosakhar.

AVAILABLE:

TAGER, [illegible] kandidat tekhnicheskikh nauk.

Designing cooling panels for furnace grates having circulation cooling. Energetik 5 no.6:26-27 Je '57. (MLRA 10:7)
(Furnaces--Grates)

TAGER, S.A., kand. tekhn. nauk; MOTIN, G.I., inzh.

Cyclone furnace of small capacity for burning milled peat. Energetik 5 no.12:8-12 D '57. (MIRA 10:12)
(Furnaces)

104-3-30/45

AUTHOR: Smirnov, A.S., Engineer and Tager, S.A. Candidate of Technical Sciences.

TITLE: High spoed stop and transfer valves for pulverised fuel pipes. (Bystrodeystvuyushchiy plotnyy klapan-pereklyuchatel' dlya pyleprovodov)

PERIODICAL: "Elektricheskiye Stantsii" (Power Stations), 1957, Vol. 28, No.3, pp. 79 - 80 (U.S.S.R.)

ABSTRACT: Pulverised fuel fired boilers have two burners each of which can take half the load; both burn continuously. Usually there are two pulverised fuel systems. Normal types of valve cannot be used on the piping of these systems and the article describes the special constructions that are recommended; they are illustrated by sketches. There is 1 figure..

AVAILABLE: Library of Congress

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MASLOV, S.A.

94-58-6-12/19

AUTHOR: An Editorial note on p 18 is followed by contributions to the discussion by a number of authors.

TITLE Discussion on the Design of Medium and Low Output Industrial Power Stations (Diskussiya po voprosu proyektirovaniya promyshlennykh elektrostantsiy sredney i maloy moshchnosti)

PERIODICAL: Promyshlennaya Energetika, 1958, Nr 6, pp 18-33 (USSR)

ABSTRACT: Editorial note p 18

The unsatisfactory position in the equipment design and construction of small and medium industrial power stations is seriously retarding power development. In Promyshlennaya Energetika 1956 Nr 9, M. I. Lavrov published an article for discussion on this subject. We must agree with Lavrov that the standard designs issued by Promenergoproyekt are unsatisfactory and new types of industrial Heat and Electric power stations are required. Small, costly, inefficient power stations are displacing small and medium heat and electric power stations simply because these latter are too big and complicated. Small and medium power stations should be cheap and simple and their design should be thoroughly reviewed. Industrial

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Discussion on the Design of Medium and Low Output Industrial Power Stations

gas turbines should be introduced. In the discussion published below there are no contributions from Works making power equipment and they and staff of Councils of National Economy are asked to join in.

Professor Golubtsov, V. A. (Corresponding Member, Academy of Science USSR), pp 18-20
Work on the development of cheap and simple industrial power stations is lagging. In 1952, at MONITOE M.I.Lavrov made a number of suggestions about drawing up new types of medium and small industrial power stations, and in 1956 he published an article on the subject in Promyshlennaya Energetika Nr 9 based on his earlier report. In the intervening five years a number of his ideas had been confirmed but they had never been adequately discussed Concerning Lavrov's article it is a good idea to have individual feed arrangements for each set, it is inadvisable to have more than one steamreduction and cooling installation because of the equipment and piping required. Lavrov's comments on the poor characteristics of feed pumps are correct. Small instruments are required

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so that control panels can be made cheaply. The proposal to reduce the size of deaerator tanks requires further consideration. The use of semi-outdoor construction is progressive. The question of local mechanisation and [illegible] of the use of building cranes is important, neither is a crane needed in the boiler house. It is correct to lighten the turbine foundations and the building structure. Some underground communications must however be retained. Not all the author's suggestions are fully worked out or acceptable, the main thing is that he has come up with new and critical ideas.

Zaib, R. G., Candidate of Technical Sciences (All-Union Thermotechnical Correspondence Institute) pp20-21

It is very necessary to revise the construction of power stations of 8 to 12 MW and Lavrov's proposals are generally acceptable. In smaller power stations use should be made of steam at 130 - 140 atms, 535-565°C using pearlitic class steel. Detail proposals are made for simplification of the thermal circuit of the power station. Boiler houses

Card 3/[illegible] can be simplified when burning pulverised fuel.

Discussion on the Design of Medium and Low Output Industrial Power Stations

Standardisation of boiler sets is discussed. Air heaters should be made smaller. Forced circulation boilers of Lamont type should be introduced because they are smaller. Construction should be speeded up using prefabricated standardised concrete parts. Unit type sets made within the limitations of the railway loading gauge can help to make construction cheaper.

Khaldeyev P. I. Engineer (Giprosakhar)
It is important to cheapen and simplify small power stations because of the large number of heat and electric power stations that it is proposed to build. Lavrov's cost curve should not rise so steeply for small sets because small sets are simple and of low capital cost. A revised cost curve for small heat and electric power stations is given in Fig.1. Capital costs of types 1 and 2 heat and electric power stations are tabulated and the reduced costs that result from fuel and ash handling and water supply in type 1 stations is evident. capital savings are up to 22%. Question of fuel and ash handling and water treatment are then discussed in detail. Ammonia-sodium cation treatment is recommended as being simpler

Discussion on the Design of Medium and Low Output Industrial Power Stations

for sugar works than H-Na cation treatment this ammonia process should be widely used in other branches of industry. Effective measures must be taken to keep ammonia out of the steam. The use of back pressure turbines is recommended. The use of pre-assembled distribution equipment for 6 kV makes it possible to simplify the main distribution equipment. Layout of electrical control and distribution gear is discussed. Fuel handling problems are then considered.
The arrangement of power stations of 6 - 8.5 MW shown in Fig.2 is in accordance with the principles explained of the two arrangements given the first is to be preferred. Most of Lavrov's suggestions for making stations cheaper and simpler are agreed with. Medium power stations should combine the practice of large and of small stations but hitherto they have been based only on that of large stations. Some of Lavrov's ideas are debatable. Unit arrangement of feed means having more feed pumps and deaerators. Whilst unit working of turbines and boilers is desirable the necessary uniformity of loading cannot

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always be achieved in industrial stations. If feed lines are not linked full use cannot be made of deaerator capacity of lightly loaded sets. Central control of the thermal and mechanical part of the station is very desirable, but cannot be achieved in most small stations with chain grate stokers with fuel of variable quality because complex automation is not possible. A number of requirements for the near future are listed: load factors should be improved by combining different types of loading; fuel should be delivered in loads equal to about half the storage capacity; equipment suitable for outdoor operation should be supplied; other improvements are listed.

Tager, S. A., Candidate of Technical Science (Power Institute, Ac. Sc. USSR) pp 25-27.
Small and medium power stations have, in recent years, been built on the model of large regional power stations, which is a mistake. Much work is required to make industrial power stations cheaper and simpler. The physical arrangement of deaerators and water treatment

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Discussion on the Design of Medium and Low Output Industrial Power Stations

plant is discussed. The idea of unit construction of boiler, turbine, deaerator, feed pump, reduction and cooling plant is hardly suitable for small and medium stations, partly because the various components must be convenient and reliable. It is often quite impossible to give each set its own reduction and cooling installation. Boiler house layout is discussed, the arrangement without basement is preferred. The climatic conditions of the USSR do not favour open air boiler houses as a general solution. Plant sizes can be cut down and boiler costs reduced. For burning small fuel, furnaces with liquid slag removal offer promise, particularly cyclone furnaces and other types recently rig tested at the Power Institute, Ac.Sc., USSR. Modern mechanised chain grate furnaces must be used. Their advantages are described. The main reason why they have not been used more extensively is that existing Soviet designs are out of date. Chain grates can be used to burn coal with high fines content, and they have been used with success for many years at the Chelyabinsk Regional Electric Power

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Station, burning local brown coal. The new method of burning hot fine fuel, developed by the Power Institute Ac.Sc. USSR makes possible complete combustion of material carried over and trapped in gasways and ash arresters. A further factor hindering the introduction of chain grate stokers is the disorganisation of fuel supply which leads to wide variations in fuel quality at any particular power station, so that the plant has to be about universal - greater uniformity of fuel quality is required. Meanwhile the fuel balance is changing, and fuel oil and natural gas are particularly suitable fuels for small power stations. In view of this changing situation small power stations should be designed to run on natural gas and oil fuel and gas turbine and diesel stations should be designed. Because of its scattered nature there is no research or design institute for industrial power supply and there should be.

Kachinskiy, R. K. (Engineer) (Ukrgiprosakhar), p 28
The unit system of operation is supported on grounds of
Card 8/11 reliability and economy. Pressures of 60-80 atms should

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be used for power stations of 8 - 12 MW. Unit feed lines are desirable but there should be automatic connection of spare feed pumps. Fuel handling equipment can be simplified. The standards of the Boiler Inspectorate should be simplified.

Kuritsyn F. F. pp 23-29

It is most important to estimate industrial loads correctly or the station will be underloaded, alternative forms of power and heat supply should be fully considered. Existing constructional standards are in urgent need of revision and are retarding the work of design organisations. Not enough attention is paid to the demands of the final customer. In Light Industry during the 5th Five Year Plan not a single project put up by TEP and Promenergoproyekt for power stations passed without important changes of output or construction and in some cases they were rejected outright. A number of industrial power stations started up in the last few years are only running on half load.

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94-58-6-12/19

Discussion on the Design of Medium and Low Output Industrial Power Stations

Lavrov M. I. (Promenergoproyekt), pp 29-33

The original author then sums up the discussion at some length. An industrial power station may take 1-2 years to design and 2-5 years to construct which is too long. Therefore all sorts of locomobiles, diesels and power trains are installed and they are very inefficient and expensive. This is also the reason for the rapid increase in small and inefficient boiler houses. Examples of this are given. Most of the proposals contained in the original article receive general support. Objections are raised against the use of unit construction because of the difficulty of regulating the loads on the units, or because more feed pumps are needed. However, load distribution and regulation really only needs special consideration when loads are unusually variable. Careful comparisons have shown that in fact unit schemes do economise on materials and equipment. The main difficulty with unit schemes is to cover the heat load and the use of special boilers for this purpose is recommended; such boilers are in fact being widely installed. Many of the

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suggestions made in the article have proved themselves in practice but are still not being widely adopted. The various recommendations are then repeated and reinforced. Objections against semi-outdoor boiler houses are met with the reply that the Ministry of Electric Power Stations has recommended their use for large stations in a number of climatic regions and has recommended outdoor installation of induced draught fans and ash arresters in all regions. All that then remains of the boiler house is the bunkers and ash handling equipment. When power stations are reconstructed it is often not possible to use the old boiler houses. Progress that is being made in the use of higher steam conditions is described but it is not yet fast enough. In the discussion objections were raised to the proposal to avoid underground services and in reply accounts are given of practical experience with the recommended construction. A number of further recommendations are then summarised under the following headings: fuel and boiler room, machine room, Heat and Electric Power Stations as a whole; construction, and auxiliary shops. There are 2 figures and 2 tables

Card 11/11

1. Industrial plants-USSR 2. Power plants-Operation-USSR 3. Power plants-Design 4. Power plants-Economic aspects 5. Power plants-Standardization

96-4-7/24

AUTHOR: [illegible]er, S. A., Candidate of Technical Sciences.

TITLE: Further ways of developing furnaces with rabbling bars. (O putyakh dal'neyshego razvitiya topok s shuruyushchey planko).

PERIODICAL: Teploenergetika, 1958, [illegible] No.4, pp. 41-46 (USSR).

ABSTRACT: Furnaces with rabbling bars are widely used when burning brown and hard coal under boilers of output 4 - 12 tons/hour. A special feature of these furnaces is that the fuel layer is displaced over a stationary flat hearth by means of a moving bar. This method of combustion in layers is rational and worth developing but so far is not effective enough. The furnaces have a single bar which is only operated from time to time and is stationary for more than three-quarters of the time. For coordinated delivery of definite amounts of fuel to the furnace and the removal of slag to the bunker, the motion of the rabbling bar must be rather complicated. Because of the way the bar works, the operation of the furnace cannot be uniform and varies cyclically. The thermal cycle of a furnace with a single rabbling bar is represented by the diagram in Fig.2.1. After making

Card 1/4 its working stroke the bar remains stationary. The

Further ways of developing furnaces with rabbling bars.

layer of fuel on the hearth likewise remains stationary and gradually burns away, so that the excess-air factor gradually rises. As the bar commences to deliver fresh fuel, which evolves volatiles, the excess-air factor falls. As the bar moves along the layer of fuel, the output of volatiles is stabilised and the excess-air factor remains approximately constant. The variations in gas formation are greater when burning dry hard coals than when burning wet brown coals. The rabbling action of the bar breaks up the layer of ash around lumps of coal and helps them to burn. However, in single-bar furnaces the bar is stationary most of the time and is not breaking up the ash in this way. To overcome these defects the first task is to improve the action of the furnace. This can be done by using a frame with a number of rabbling bars, as proposed by Engineer S. Ye. Zhitenev. Fig.3 shows two main designs of this kind. The first was applied to a 'Komega' furnace in which the bars and chain drive of the original design were replaced by a multi-bar frame; the second is a new design in which there is no ash pit. The frame consists of a number of rabbling bars

 of normal shape rigidly connected together by a tubular

Further ways of developing furnaces with rabbling bars.

frame. Each bar displaces the layer on the hearth by a distance of 0.6 - 0.8 metres. The frame, moving as a whole, displaces the whole fuel layer simultaneously over the entire length of the frame. Thus the stroke, rate of motion, and duration of each stroke are much less than with a single bar and the frame is working almost all the time. As a result the conditions of combustion of the fuel layer approach those of steady chain-grate operation. Variations in excess-air factor are largely overcome. However, a disadvantage of the multi-bar frame is the need for continuous water cooling. The frame may be operated either with constant stroke at variable speed or with constant speed and variable stroke. The diagram II given in Fig.2 corresponds to this latter case. Comparison of diagrams I and II in Fig.2 shows that the process of combustion in the furnace with a multi-bar frame is very different from that achieved with a single rabbling bar. There is less variation in the excess-air factor, and instead of being markedly cyclic, conditions are almost steady. They are even more uniform when, as in Fig.2 III, the stroke is constant: this is because the quantity of fuel delivered in a full stroke of the frame

Further ways of developing furnaces with rabbling bars.

does not depend on the method of regulating the speed. A further advantage of the multi-bar frame is the ease with which it can be adapted to automatic control. The performance of a multi-bar frame may be judged by the uniformity of the fuel layer and the absence of bare patches at the end of the grate. Conditions are easiest when the fuel layer is thick. The use of multi-bar frames offers the possibility of constructing simple and cheap mechanised furnaces. These would be a further development of pulverised/layer furnaces in which the most complex and expensive mechanism, the chain grate, can be replaced by a simple hearth without an ash pit. A schematic diagram of a furnace of this kind is given in Fig.4. The combination of overhead fuel delivery with displacement of the layer by a multi-bar frame is a rational solution, since the frame gives practically steady motion of the layer as in a chain grate.

Card 4/4 There are 4 figures.

ASSOCIATION: Power Institute of the Ac.Sc. of the USSR. Energeticheskiy Institut AN SSSR).

AVAILABLE: Library of Congress.

SOV/96-58-10-3/25

AUTHOR: Tager, S.A. (Cand.Tech.Sci.)

TITLE: The influence of fuel ash and volatile contents on mechanical under-combustion (Vliyaniye soderzhaniya zoly i vykhoda letuchikh v iskhodnom toplive na mekhanicheskiy nedozhog)

PERIODICAL: Teploenergetika, 1958, No.10. PP. 10-16 (USSR)

ABSTRACT: The formula used in the Standard Procedure for the Thermal Design of Boilers is given. It is assumed that the ash content of the fuel and the proportion of unburnt fuel are independent of one another. Published work relates the unburnt fuel in the slag to the ash content of the fuel when burning brown coal on chain-grate stokers. A minimum is observed in the curve of unburnt content, but for some time the reality of this minimum was not believed. Other published work demonstrates a similar behavior when burning pulverised fuel. The way in which this minimum can occur is discussed; in the first place the mechanism of mechanical under-combustion is described with reference to Fig.2. A magnitude known as 'the degree of combustion' is introduced and defined as the ratio of the solid carbon actually consumed to the initial content of it in the fuel. The difference between this number and unity is defined as the 'degree of under-combustion'. Equations are given for the calculation of these magnitudes from test results. General relationships between the combustibles contents in the residues as functions of the degree of combustion of the initial fuel, derived from Eqn.11, are given in

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Fig.3. The shape of these curves is discussed; the conclusions derived are used to explain the shape of the experimental curves in Fig.1., where the unburnt fuel content of the slag is plotted as function of the ash content of the fuel. An expression is given for the coefficient of distillation of the fuel. The new procedure for calculation recommended in the article was used in plotting the graphs in Fig.5; they relate to chain-grate stoking and show the mechanical under-combustion, the degree of under-combustion, and the unburnt fuel content of the slag. These curves then form the basis for a general discussion of the process of combustion in furnaces. A table is given of the salient characteristics of a number of types of coal available in the USSR, with the corresponding values of the combustibles in the carry-over when they are burnt as pulverised fuel. Curves similar to those of Fig.5, but relating to pulverised-fuel firing, are given in Fig.6. It is shown that for pulverised-fuel firing a linear relationship may be assumed between the dry ash content of the fuel and the unburnt fuel in the slag. On the other hand, as will be seen from Fig.7, a curve must be used for this

relationship when chain-grate stoking is considered. In practice, however, it is recommended to use an approximate linear relationship corresponding to curve 3. in Fig.7. There are 7 figures and 4 Soviet references.

ASSOCIATION: Power Institute, AS USSR (Energeticheskiy Institut AN SSSR)

TAGER, S.A., kand.tekhn.nauk; AL'BERTINSKIY, L.I., inzh.

Burning nusks in cyclone furnaces. Teploenergetika 7 no.5: 48-53 My '60. (MIRA 13:8)

1. Energeticheskiy institut AN SSSR i Energotekhnaladka.
(Furnaces)

TAGER, S.A.

Eliminating the difficulties in the operation of PMZ furnaces caused by the use of wet coal. Energetik 8 no.6:35 Je '60. (MIRA 13:7)

(Furnaces)

ROMADIN, V.P., doktor tekhn.nauk; TAGER, S.A., kand.tekhn.nauk

Main decisions of the all-Union conference on design principles and methods for developing large furnace systems. Teploenergetika 8 no.3:89-91 Mr '61. (MIRA 14:9)
(Furnaces--Congresses)

TAGER, S.A., kand. tekhn. nauk; RYABTSEV, N.I., inzh.

Burning of anthracite fines on the chain grates under DKV-10 boilers. Energetik 9 no.1:13-17 Ja '61. (MIRA 16:7)

(Boilers) (Furnaces—Grates)

TAGER, S.A.

Use of BTsR grates in DKV boilers. Energetik 9 no.7:36 Jl '61.
(MIRA 14:9)

(Boilers)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754710019-6"

TAGER, S.A., kand.tekhn.nauk; SHIPKOV, N.N., inzh.

Selecting a flow sheet and the experimental investigation of combustion chambers with an air-fountain effect by means of cold models. Energotekh. ispol'. topl. no.2:171-183 '62. (MIRA 16:5)
(Combustion--Models)

TAGER, S.A., kand.tekhn.nauk

Calculation of a carry-over return system. Elek.sta. 33 no.12:16-21 D '62. (MIRA 16:2)
(Boilers)

SHIPKOV, N.N.; TAGER, S.A.

Thermal operation of an air-stream furnaces. Energotekh.ispol'.topl. no.3 171-178 '63. (MIRA 16:5)

(Furnaces) (Combustion research)

L 48 06-65 EWG(j)/EWT(m)/EPF(c)/EPR/ENP(j)/EWP(t)/EWP(b) Pc-4/Pr-4/Ps-4/
Pi-4 IJP(c)/RPL JD/WW/JW/RM UR/0096/65/000/005/0094/0094
ACCESSION NR: AP5011778

AUTHOR: Tager, S. A. (Candidate of technical sciences); Smirnov, A. S. (Engineer)

TITLE: I-theta diagrams of combustion products allowing for the effect of the dissociation of CO_2 and H_2O

SOURCE: Teploenergetika, no. 5, 1965, 94

TOPIC TAGS: combustion temperature, combustion product, dissociation, carbon dioxide, combustion

ABSTRACT: In high-performance burners, the true combustion temperature is lower than the calculated, which is due to the endothermic dissociation of the combustion products (CO_2 and H_2O) at high temperatures (1550—1600C). To determine the true combustion temperature, the dissociation of the combustion products has to be taken into account. This is done by obtaining heat of combustion vs temperature diagrams using M. B. Ravich's equation (Uproshchennaya metodika teplotekhnicheskikh raschetov. Izd-vo AN SSSR, 1958). Such a diagram is given for the combustion products of Donets anthracite (ASh) and sour mazut at atmospheric pressure and an air excess coefficient of 1.1. Orig. art. has: 1 figure and 1 formula. [PS]

Card 1/2

L 48306-65

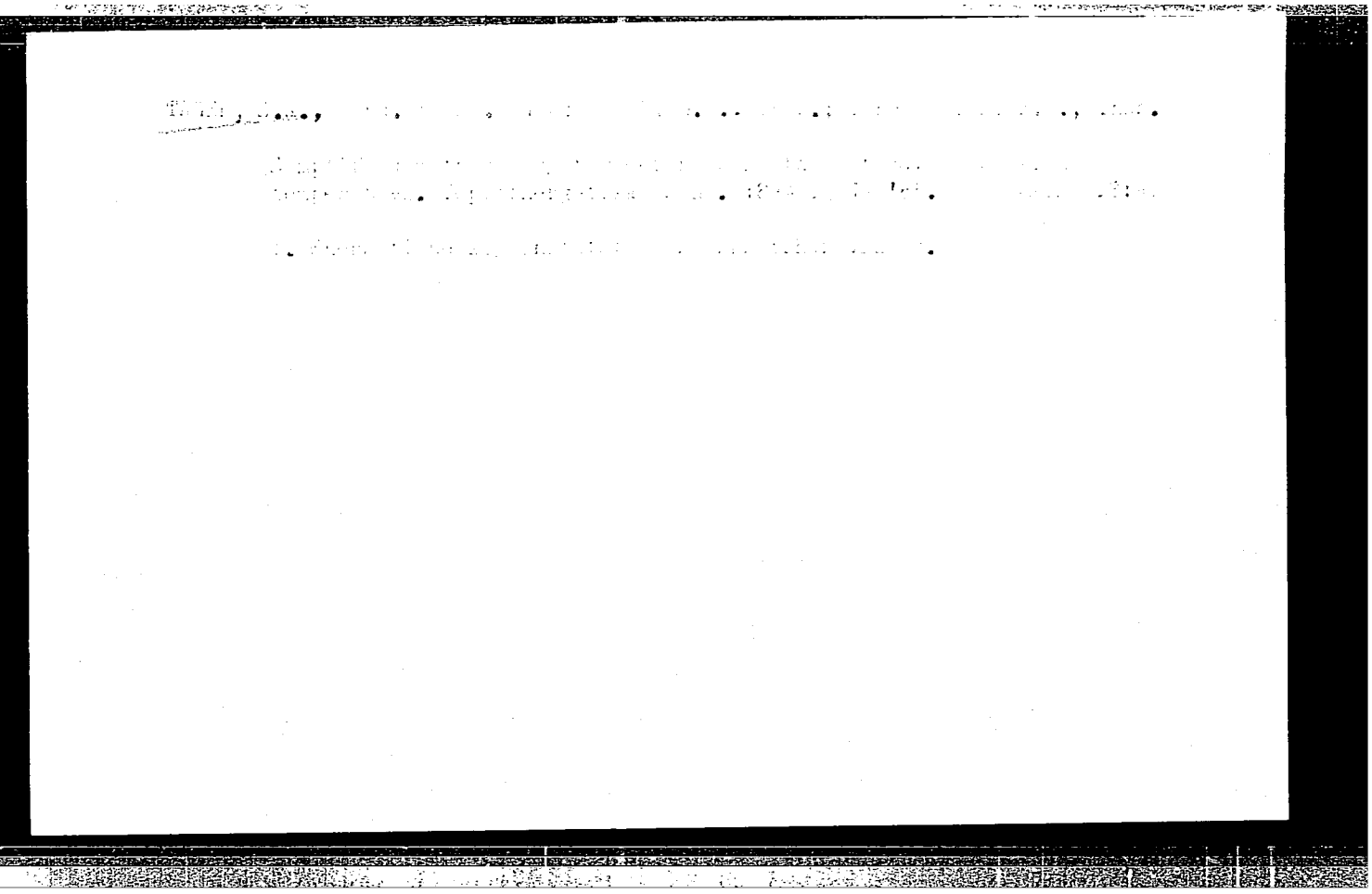
ACCESSION NR: AP5011778

ASSOCIATION: Energeticheskiy institut im. G. M. Krhizhanovskiy (Power Engineering Institute)

SUBMITTED: 00 ENCL: 00 SUB CODE: FP

NO REF SOV: 001 OTHER: 000 ATD PRESS: 3254

Card 2/2



TAG.R, S.A., kand. tekhn. nauk

Utilization of the mineral part of the fuel in electric power plants. Elek. sta. 36 no.12:10-15 D '65. (MIRA 18:12)

LOSCH, August; AZENSHTADT, L.A. [translator]; AYZENSHTADT, G.N. [translator]; TAGER, S.M. [translator]; FEYGIN, Ya.G., red.

[The economics of location] Geograficheskoe razmeshchenie khozyaistva. Moskva, Izd-vo inostr.lit-ry, 1959. 455 p. (MIRA 13:6)
Translated from the English.
(Industries, Location of)

ARON, Ye.I. [translator]; MASH, V.A. [translator]; TAGER, S.N. [translator]; EYKHENVAL'D, A.V. [translator]; KHEYNMAN, S.A., red.; KHABINSKAYA, F.A., red.; ZLOTNIKOV, A.L., red.; KORMNOV, Yu.F., red.; IOVLEVA, N.A., tekhn.red.; POTAPENKOVA, Ye.S., tekhn.red.

[Organization of production at industrial enterprises of the U.S.A.] Organizatsiia proizvodstva na promyshlennykh predpriiatiiakh SShA. Moskva, Izd-vo inostr.lit-ry. [Publ. in English as "Industrial Engineering Handbook."] Vol.1. 1960. 475 p. (MIRA 13:11)

(United States--Industrial management)

TAGER, T. B.

4131. Methods for the evaluation of sodium-butadiene rubbers. A. A. TAGER, T. B. GORDEEVA, D. Y. KARLINSKAYA, and L. M. KUROCHKINA. *Khim. Prom.*, 1955, 209–13; *Chem. Abs.*, 1956, 50, 590. *Gummi u. Asbest*, 1956, 9, 468. An indication of the structure and quality is obtainable by heating under nitrogen for 40 min at 140° to 150°C and 200 atm. pressure and then releasing the pressure. Alternatively the thermomechanical curves during heating may be determined. 3S2D21.064

TAGEYEV, A. M.

231T89

USSR/Meteorology - Current Velocity Oct 52

"Nomogram for Computing the Average Velocity of Current of Rivers and Canals," A. M. Tageyev, Leningrad, Project Office, GULLP MVD (Main Admin of Timber Ind, Min of Int Affairs)

"Meteorol i Gidrol" No 10, p 54

The nomogram is constructed for the formula $v = \frac{1}{n} Rx\sqrt{iR}$; here v is the av velocity of current m/sec, $\frac{1}{n}$ is the inverse coeff of roughness (found in the table of Sribnyy), R is the av hydraulic radius or av depth in meters, i is the inclination (R and i are detd from natural conditions), and x is the exponent in Pavlovskiy's formula.

231T89

231T89

[illegible], D. L., Prof.

Diesel Motor

Can the modern high compression engine be called a diesel? Vest. mash., 32, No. 1, 1952.

9. Monthly List of Russian Accessions, Library of Congress, October 1952 1953, Uncl.

TAGEYEV, V. M.

USSR/Engineering
Foundry Practice
Casting

Feb 1948

"Development and Present Day Statur of Continuous Casting of Metals," I. Ya. Granat, Candidate Tech Sci, V. M. Tageyev, Engr, 7 pp

"Stal'" No 2

In spite of the great engineering, technologic, and economic advantages of continuous casting of steel parts, the basic method of conducting continuous casting--with a moving and stationary crystallizer--cannot be said to be sufficiently developed for efficient industrila use. It is important and necessary to intensify experimental work in this field.

PA 41[1]17

USSR/Metals - Alloys 21 Jul 49
Crystallization of Alloys

PA 150T55

"Causes and Mechanism of the Development of Chemical Heterogeneity During the Crystallization of Alloys," V. M. Tageyev, 4 pp

"Dok Ak Nauk SSSR" Vol LXVII, No 3

Tests made by heat-treating 5-kg steel samples in an induction furnace at 1,460° showed that necessary and sufficient conditions for emergence and development of chemical heterogeneity in castings and ingots are: (1) difference in solubility of admixtures in solid and liquid phases determined by nature of

150T55

USSR/Metals - Alloys (Contd) 21 Jul 49

components forming the alloy, and (2) coexistence of admixtures in the liquid phase in the contiguity of liquid and two-phase regions during a sufficient time interval for the diffusion process. Submitted by Acad N. T. Gudtsov 28 May 49.

150T55

TAGEYEV, V. M.

Submitted by A

137-58-4-6735

Translation from: Referativnyy zhurnal. Metallurgiya. 1958 Nr 4 p 62 (USSR)

AUTHORS Tagayev, V.M., Ivanov, K.N., Bodyagin, D.Ya., Lavrent'yev, B.A.

TITLE Improving the Quality of Steel Ingots and the Technical and Economic Level of Their Utilization (Uluchsheniye kachestva stal'nykh slitkov i tekhniko-ekonomicheskikh pokazateley ikh ispol'zovaniya)

PERIODICAL V sb. Metallurgiya Moscow-Leningrad. AN SSSR. 1957 pp 65-76

ABSTRACT. The results of investigations by Leningrad metallurgists in the theory of crystallization and the mechanism of the origin of various types of inhomogeneities in steel ingots are set forth, new types of ingots for forging and rolling, designed on the basis thereof, are described. Data on the employment of specialized forging ingots with smaller shrinkage heads, without shrinkage head, and with greater taper (10-12%), and on the use of hollow ingots, are presented.

A.Sh.

Card 1/1

1. Steel ingots--Development 2. Crystallization--Theory

133-9-14/23

AUTHOR: Tageyev, V.M., Candidate of Technical Sciences and Smirnov, Yu.D., Engineer.

TITLE: Prevention of the Formation of "Whiskers" during Crystallization of Steel Using Additions of Rare Earth Elements. (Predotvrashcheniye obrazovaniya "usov" pri kristallizatsii stali s pomoshch'yu redkozemel'nykh elementov)

PERIODICAL: Stal', 1957, No.9, 823 - 828 (USSR).

ABSTRACT: The influence of admixtures of rare earth elements on non-uniformity of the distribution of sulphur and other admixtures during crystallization of steel was investigated. Experimental ingots of H40 steel melted in acid-induction furnaces were cast in sand moulds. The dimensions and composition of experimental ingots is given in Table 1. The rare earth alloy containing up to 43% of cerium, about 5% of iron (remaining lanthanum and other rare earth metal) was added in a proportion of 0.05 - 0.2% either to the ladle or placed in pieces on the bottom of the mould. Simultaneously, a control ingot without the alloying addition was cast from the same melt. For the determination of the distribution of inclusions radio-active isotopes of S^{35} and P^{32} were used in addition to the usual chemical and metallographic analyses. Radio-active elements were added as

Cardl/3 elemental sulphur and red phosphorous in sealed steel tubes and

Prevention of the Formation of "Whiskers" during Crystallization of Steel Using Additions of Rare Earth Elements.

in such amounts that their activity at the time of exposure was 0.1 and 0.01 m Curies/kg, respectively. The fixation of the distribution of radio-active elements radiograms of longitudinal and transverse cross-sections of ingots were made. The exposure time varied between 15-20 days. The radio-active phosphorous was added to all ingots, sulphur only to some of them. Characteristic data on the macrostructure of the experimental ingots are given in Table 2. Negatives of some of the radiograms obtained are shown in Figs. 1 - 7. It was established that alloying of 0.1 - 0.2% of rare earth elements with deoxidised steel prevents or decreases the segregation of sulphur and other admixtures (possessing different solubilities in solid and liquid phases) in the form of whiskers. This is due to precipitation of the sulphide phase at an earlier stage of crystallisation, thus sharply decreasing the diffusion redistribution of sulphur in the two-phase zone of ingots. During the crystallisation, a considerable proportion of sulphur in the form of sulphide inclusions is distributed along the axis of dendrites with the corresponding decrease of its concentration in inter-axial spaces with a subsequent decrease in the dendritic non-uniformity of steel (more

uniform distribution of sulphur inside and along the boundaries of crystallites). A more uniform distribution of phosphorous and other admixtures is due to a decrease in the migration of the liquid solution in the two-phase zone, apparently caused by a decrease in its mobility resulting from a decrease in the concentration of sulphur. The adsorption nature of the observed effect of enrichment with phosphorus and carbon of the sulphide phase formed in the liquid steel and floating to the top during alloying it with rare earth elements (Table 3), is postulated. The macrostructure of steel alloyed with rare earth elements (0.05 - 0.2%) becomes somewhat coarser. The above physico-chemical method of decreasing the macroscopic non-uniformity of steel during its crystallisation can be probably utilised in the production of semis by continuous casting. There are 3 tables, 7 figures and 1 Slavic reference.

AVAILABLE: Library of Congress.

Card 3/3

SOV/123-59-15-60471

Translation from: Referativnyy zhurnal. Mashinostroyeniye, 1959, Nr 15, p 223 (USSR)

AUTHORS: Tageyev, V.M., Smirnov, Yu.D.

TITLE: Investigations of the Process of Non-Axial Heterogeneity Formation in Steel Bars and Castings

PERIODICAL: V sb.: Zatverdevaniye metallov. Moscow. Mashgiz, 1958, pp 352 - 373

ABSTRACT: Tests with bars (B) of grade 40 steel were carried out. Two B solidified in the crucible of a 1-ton induction furnace after its having been switched off, while one of the furnaces was tilted through an angle of 45°. Eight B of 1.8 - 6 tons weight were cast into sand molds from the same steel charge, smelted in a 25-ton acid open-hearth furnace. One of the B was case in a horizontal position, the rest vertically. In some cases diaphragms of a molding mixture were put across the B with an opening of 150 mm in diameter in order to obtain an increased shifting of the steel in the region of the diaphragm; a rarefication was created in the interior of the head section of B in order to obtain an intensified gas liberation of air pressure on the B up to 3.5 at. For the examination of the metal flow radioactive W^{185}, S^{35} and P^{32} were from time to time introduced into it. Based on the

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SOV/123-59-15-60471

Investigations of the Process of Non-Axial Heterogeneity Formation in Steel Bars and Castings

investigations a hypothesis was advanced in order to explain the mechanism of the formation of non-axial heterogeniety (NH) in bubble-free steel bars. NH develops during the crystallization process of B in the region of the liquid-solid state and is the result of a local redistribution of impurities. Shrink holes which are formed during the crystallization in the two-phase zone are filled with a liquid, which is enriched by impurities, flowing out from above-located interaxial dendritic spaces. Starting at any interaxial space the flow entails a continuous chain of similar subsequent displacements of liquid, enriched by impurities, resulting in the forming of a "whisker" of the fiber shape. The diffusion of the admixtures into the "whisker" zone and into the adjacent interdendritic sections considerably increases the NH. In this way the NH has a direct connection with the dendritic heterogeneity. The development of NH may be favored by delayed cooling, by a liberation of gas (though NH may occur also when gases are not liberated), by mechanical effects and other factors which cause the movement of the liquid during the crystallization process. Measures of fighting NH: a reduction of the content of S and P and gases in the steel, a reduction of the cross-section of the bar in order to achieve a greater crystallization rate. 18 figures.

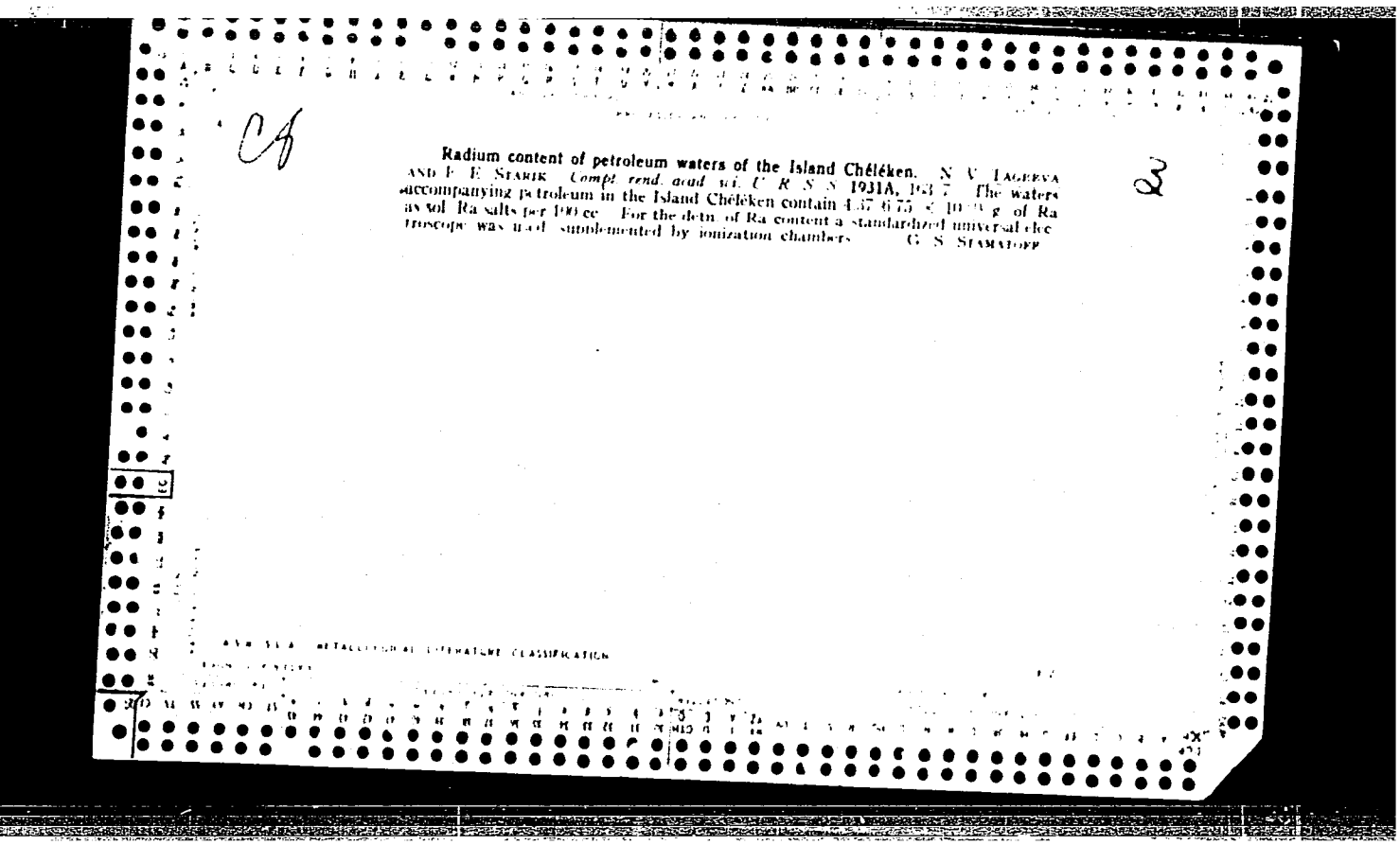
O.S.M.

Card 2/2

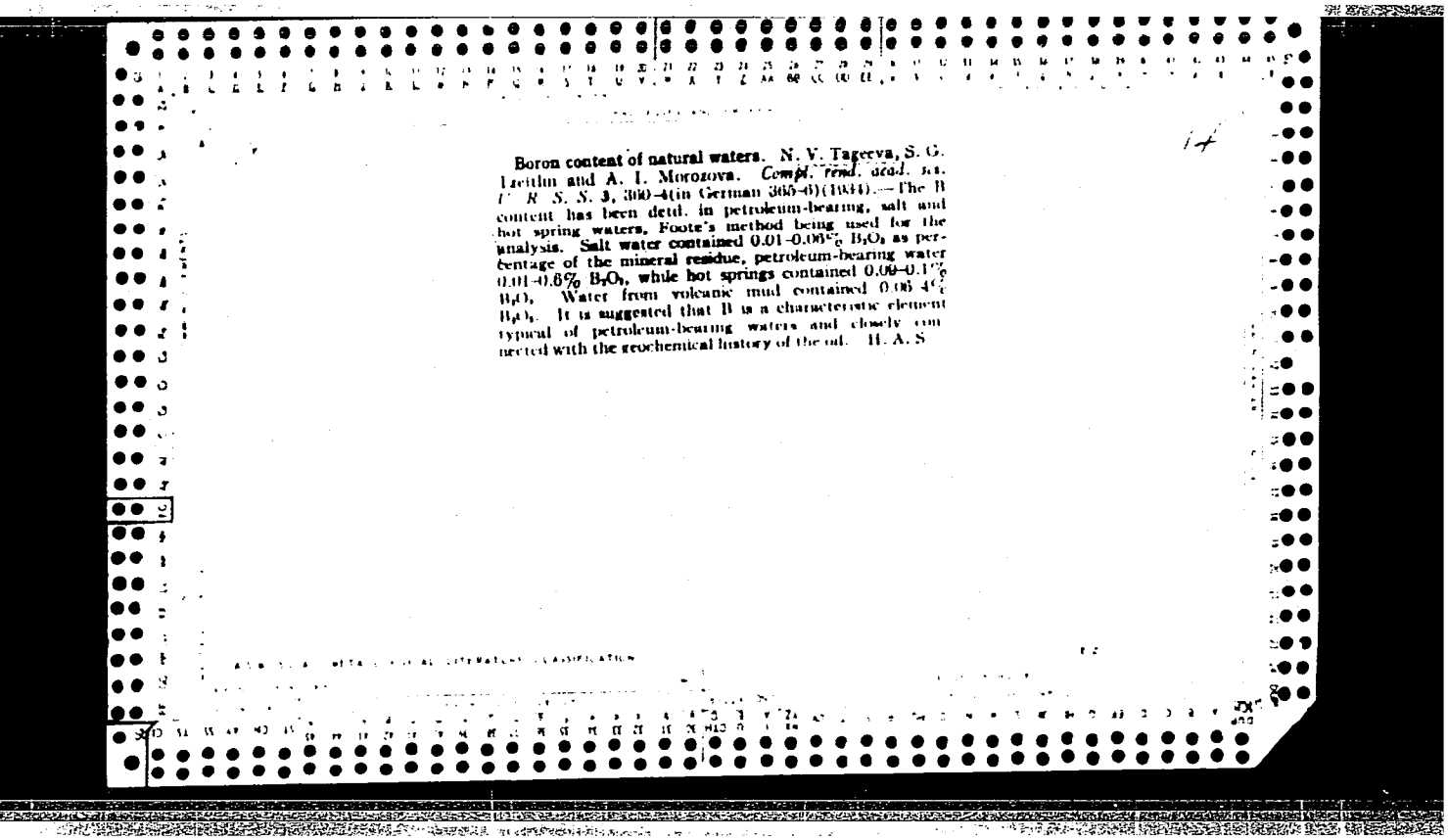
СЛИТОК И СВОЙСТВА СТАЛИ

Д.Ф.Чернега	Исследование влияния электрошлакового обогрева прибыльной части слитков расходующимися электродами на поведение водорода и свойства металла.
К.С.[illegible] Л.Н.[illegible]	Распределение неметаллических включений в слитках кипящей стали.
Ю.А.Нехендзи Н.Г.Гиршович В.Я.Вальц	Кинетика затвердевания железо-углеродистых сплавов в песчаных, металлических и водоохлаждаемых формах.
В.Г.Грузин	Структурообразование в зависимости от температурного поля жидкой стали.
С.А.Иодковский В.К.Новицкий А.С.Лобода	Влияние толщины стенки изложницы на качество слитков из сплавов на никелевой основе.
В.Г.Куликов С.М.Гетчев	Поведение экзогенных включений в слитке спокойной стали.
В.М.Тагеев Ю.Д.Смирнов	О связи дендритной и зональной химической неоднородности слитков и отливок в процессе кристаллизации стали.
В.М.Тагеев Ю.Д.Смирнов	Влияние выделения газов при кристаллизации стали на химическую неоднородность слитков и отливок.
А.Н.Морозов В.С.Рутес	Механизм образования сотовых пузырей в слитках кипящей стали.
Ю.А.Нехендзи В.П.Капинос	Поглощение водорода сплавами при заполнении литейной формы.

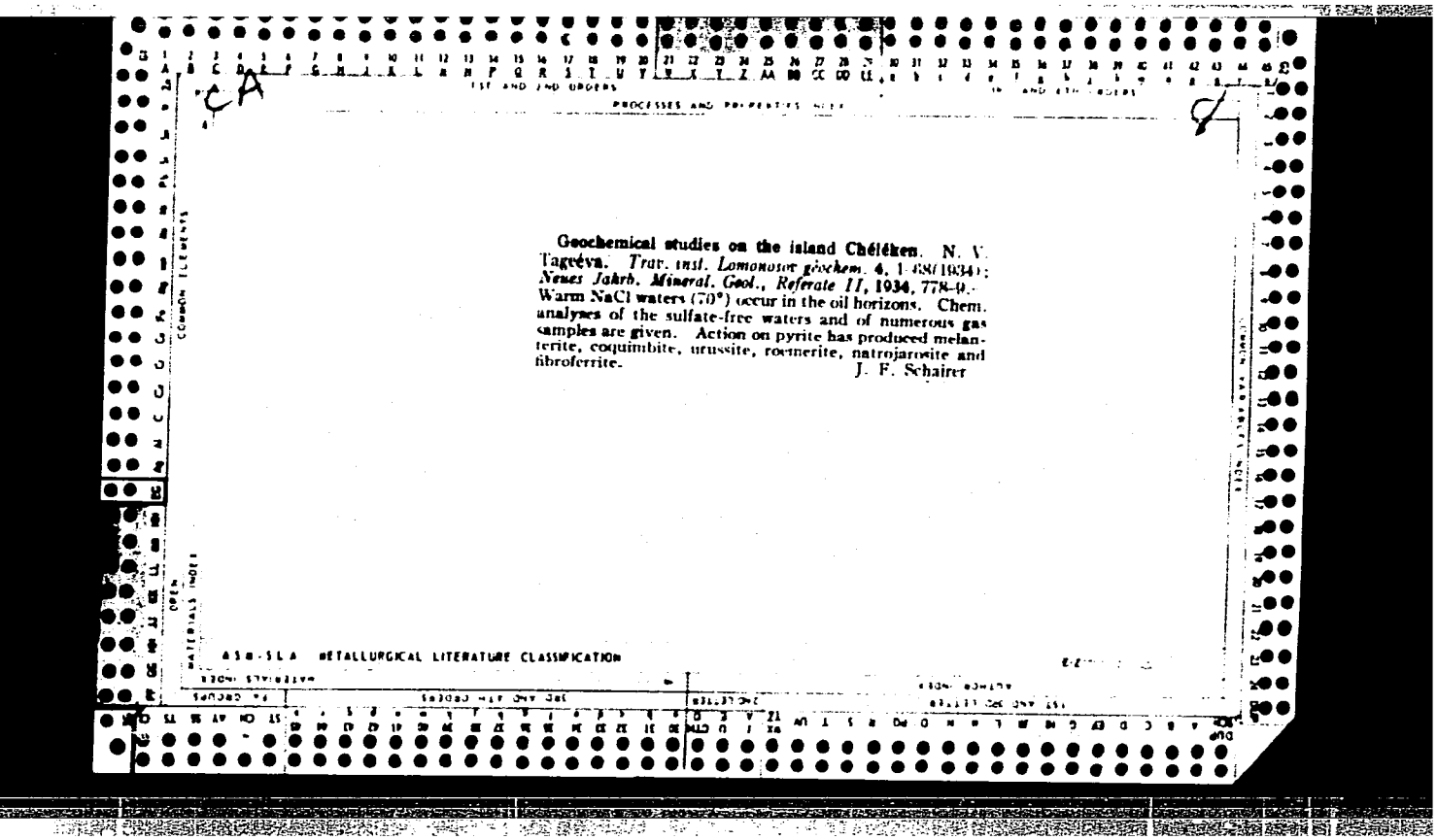
report submitted for the 5th Physical Chemical Conference on Steel Production, Moscow-- 30 Jun 1959.



Radium content of petroleum waters of the Island Chéléken. N. V. Lagreva and P. E. Starik. *Compt. rend. acad. sci. U. R. S. S.* 1931A, 163-7. The waters accompanying petroleum in the Island Chéléken contain 4.37-6.75 × 10⁻¹¹ g. of Ra as sol. Ra salts per 100 cc. For the detn. of Ra content a standardized universal electroscope was used supplemented by ionization chambers. G. S. Stamatoff

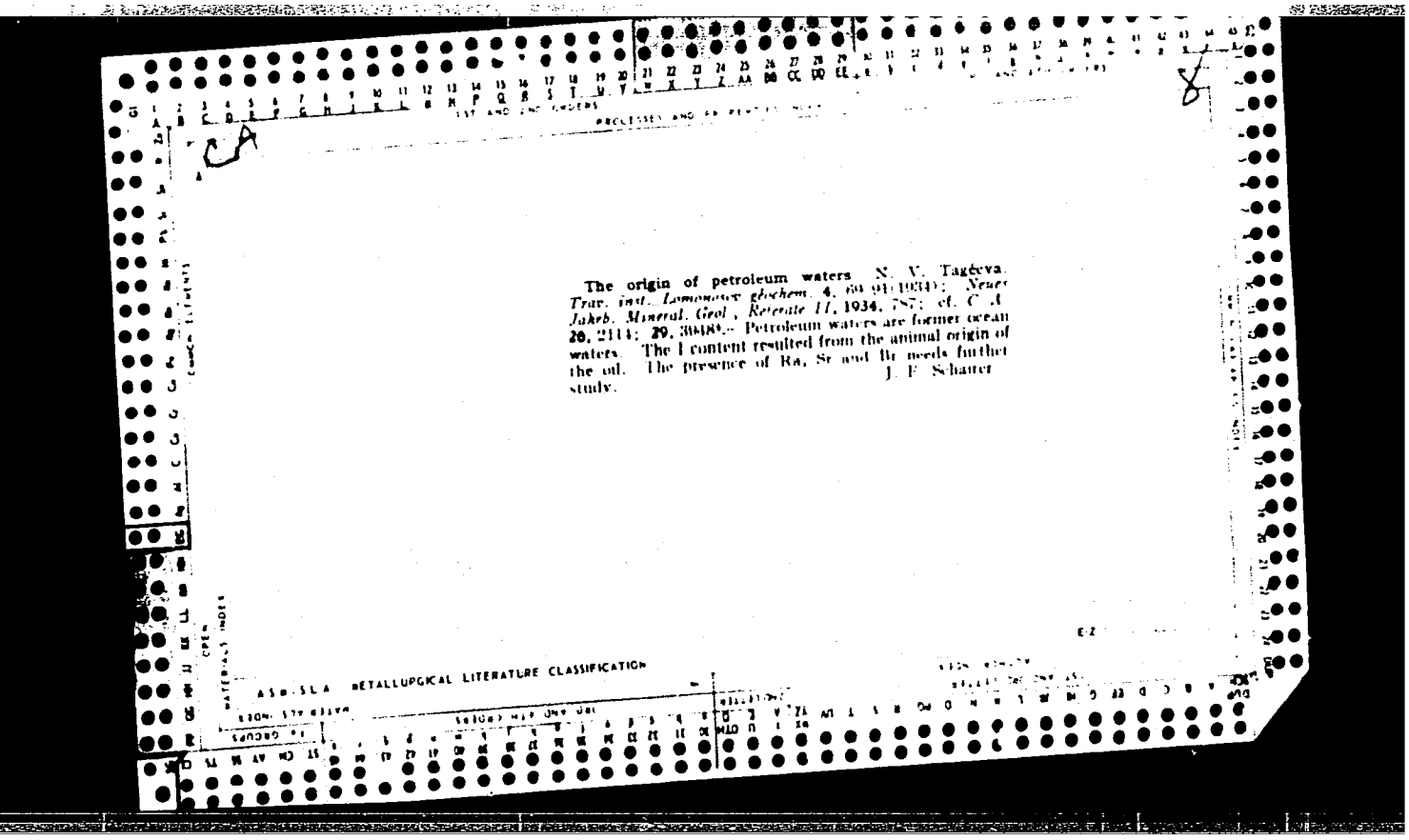


Boron content of natural waters. N. V. Tageeva, S. G. Lezitin and A. I. Morozova. *Compt. rend. acad. sci. U. R. S. S.* **3**, 369–4(in German 365–6)(1944).—The B content has been detd. in petroleum-bearing, salt and hot spring waters, Foote's method being used for the analysis. Salt water contained 0.01–0.05% B_2O_3 as percentage of the mineral residue, petroleum-bearing water 0.01–0.8% B_2O_3, while hot springs contained 0.00–0.1% B_2O_3. Water from volcanic mud contained 0.08 4% B_2O_3. It is suggested that B is a characteristic element typical of petroleum-bearing waters and closely connected with the geochemical history of the oil. H. A. S



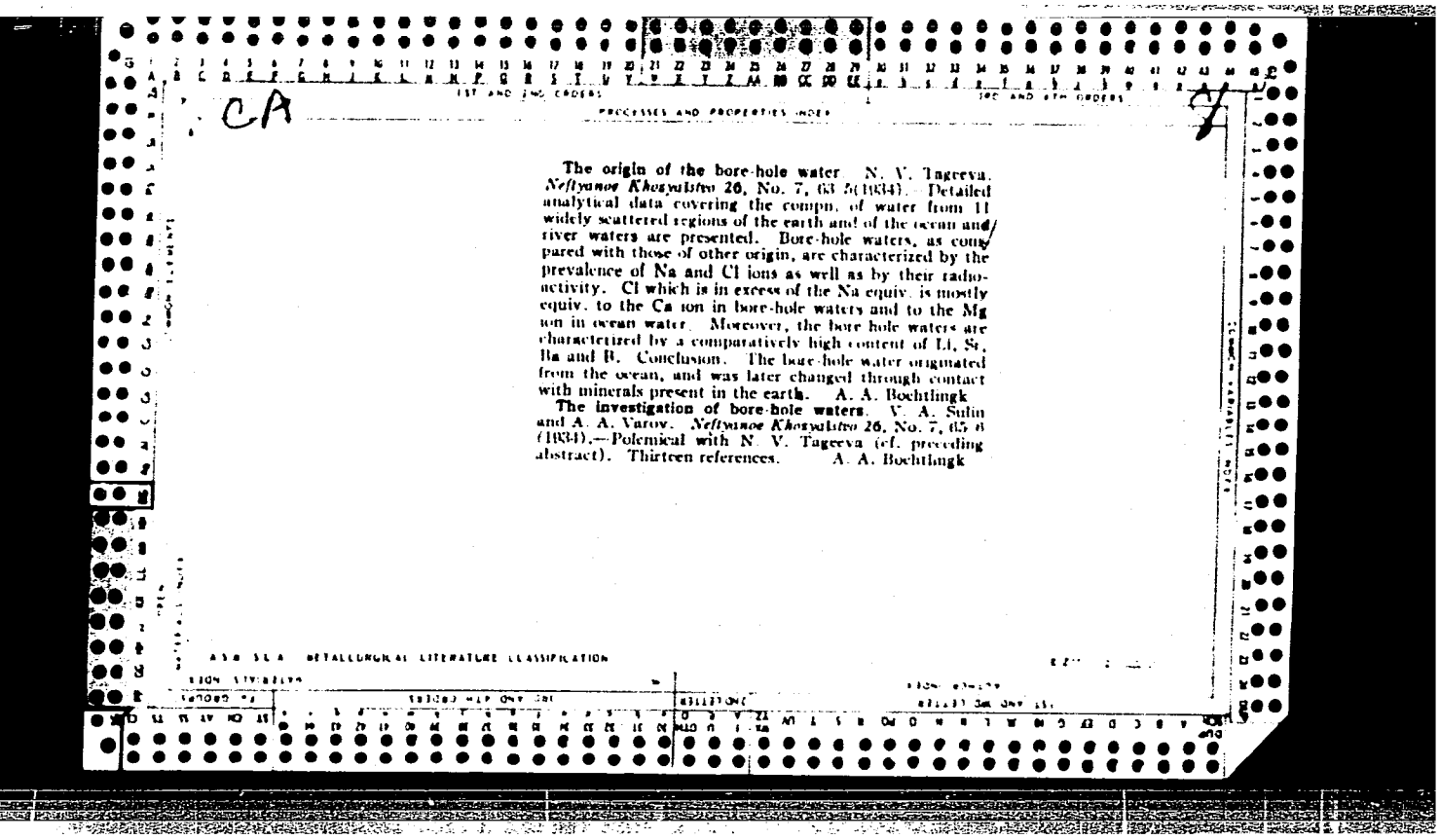
Geochemical studies on the island Chéléken. N. V. Tagééva. *Trav. inst. Lomonosov géochem.* **4**, 1-68(1934); *Neues Jahrb. Mineral. Geol., Referate II*, **1934**, 778-9.—Warm NaCl waters (70°) occur in the oil horizons. Chem. analyses of the sulfate-free waters and of numerous gas samples are given. Action on pyrite has produced melanterite, coquimbite, urussite, roemerite, natrojarosite and fibroferrite.

J. F. Schairer



The origin of petroleum waters. N. V. Tageeva. *Trav. inst. Lomonosov géochem.* 4, 60-91 (1934); *Neues Jahrb. Mineral. Geol., Referate II*, 1934, 787; cf. *C. A.* **28**, 2114; **29**, 3048.— Petroleum waters are former ocean waters. The I content resulted from the animal origin of the oil. The presence of Ra, Sr and Br needs further study.

J. F. Schairer

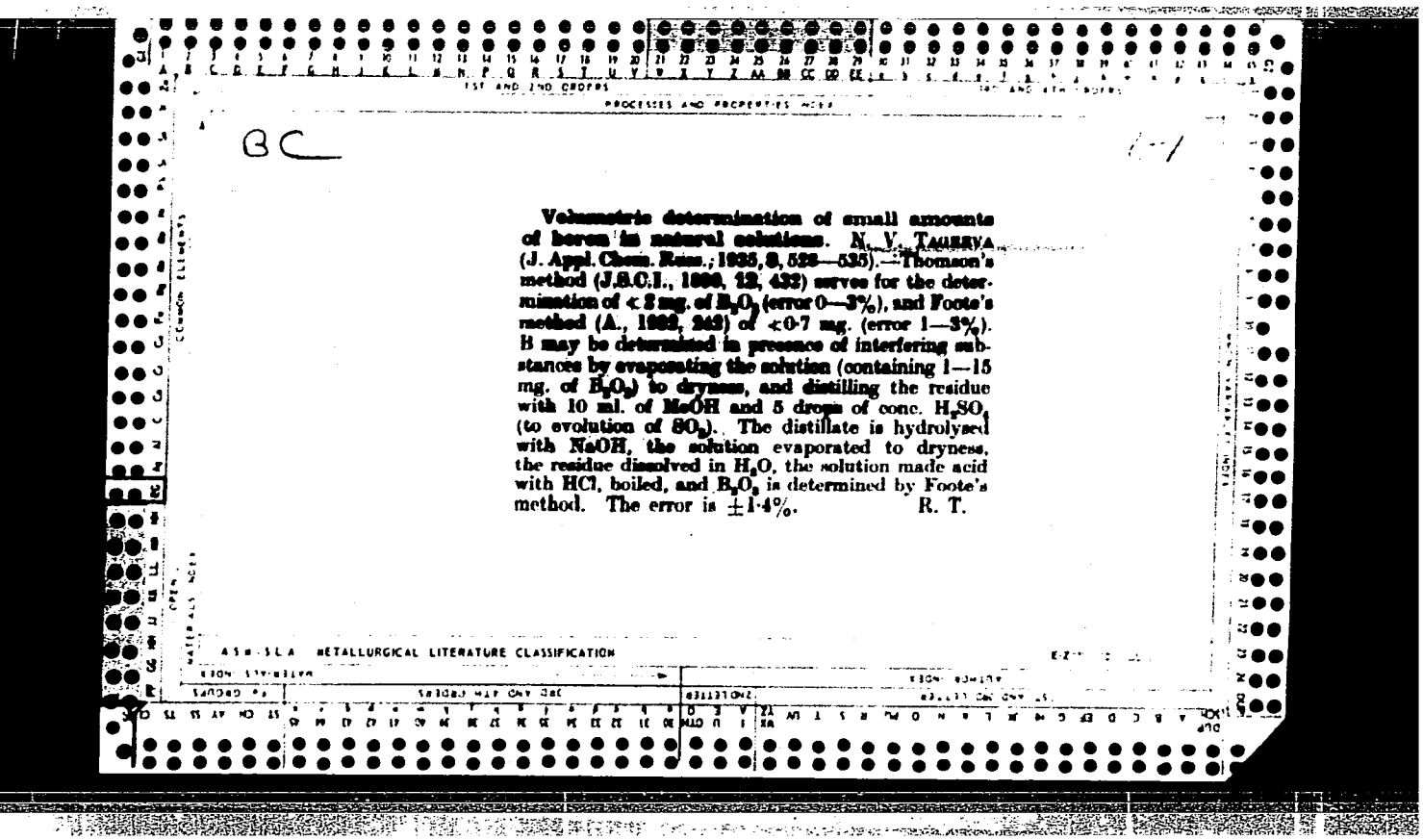


CA

PROCESSES AND PROPERTIES INDEX

The origin of the bore-hole water. N. V. Tageeva. *Neftyanoe Khozyaistvo* **26**, No. 7, 63-5(1934). Detailed analytical data covering the compn. of water from 11 widely scattered regions of the earth and of the ocean and river waters are presented. Bore-hole waters, as compared with those of other origin, are characterized by the prevalence of Na and Cl ions as well as by their radioactivity. Cl which is in excess of the Na equiv. is mostly equiv. to the Ca ion in bore-hole waters and to the Mg ion in ocean water. Moreover, the bore hole waters are characterized by a comparatively high content of Li, Sr, Ba and B. Conclusion. The bore-hole water originated from the ocean, and was later changed through contact with minerals present in the earth. A. A. Boehtlingk

The investigation of bore-hole waters. V. A. Sulin and A. A. Varov. *Neftyanoe Khozyaistvo* **26**, No. 7, 65-8 (1934).—Polemical with N. V. Tageeva (cf. preceding abstract). Thirteen references. A. A. Boehtlingk



BC

Volumetric determination of small amounts of boron in natural solutions. N. V. TALIEVA. (J. Appl. Chem. Russ., 1935, 8, 528—535).—Thomson's method (J.S.C.I., 1890, 12, 432) serves for the determination of < 2 mg. of B_2O_3 (error 0—3%), and Foote's method (A., 1902, 262) of < 0·7 mg. (error 1—3%). B may be determined in presence of interfering substances by evaporating the solution (containing 1—15 mg. of B_2O_3) to dryness, and distilling the residue with 10 ml. of MeOH and 5 drops of conc. H_2SO_4 (to evolution of SO_3). The distillate is hydrolysed with NaOH, the solution evaporated to dryness, the residue dissolved in H_2O, the solution made acid with HCl, boiled, and B_2O_3 is determined by Foote's method. The error is ±1·4%. R. T.

A.S.M.-S.L.A. METALLURGICAL LITERATURE CLASSIFICATION

[illegible], [illegible]

[illegible], [illegible] "[illegible] Investigations of the Emba Salt Domes." In the [illegible] [illegible], Leningrad-Moscow, vol. 1, 1937, pp. 331-355.

AS 6a

NT-10, Analysis

Zirconium-alizarin method of determining flourine in natural waters. N. V. Tageeva (J. Appl. Chem. Russ., 1942, 15, [illegible]-[illegible]).—De Boer's method (A., 1924, ii, 205) is applicable to solutions containing < 0.2 mg. % of F'; the error is > 5-[illegible] %. Cl', SO_4'', HPO_4'', and AsO_4''' interfere, and directions for the preliminary elimination of these ions are given. Naphthenic acids, present in bore-waters do not interfere.

R. T.

...

Mbr., Inst. Mineral Fuels, Dept. Tech. Sci. Acad. Sci., -1943-.
Mbr., Geochem. Lab., Petroleum Inst., -Dept. Tech. Sci., Acad. Sci., -1942-;
"Fluorine and Boron in Natural Waters and Their Bearing on the Occurrence of Petroleum," Lon. Ak., 3., Nos. 4-5, 1942; "On Geochemistry of Subterranean Waters in the Tertiarian Republic," Ibid., 3., No. 4, 1943.

H L 11 Geochemistry

Geochemistry of subterranean waters of Tartar Republic. N. V. Tageeva (*Compt. rend. Acad. Sci. U.R.S.S.*, 1943, **39**, 244—247). — Petroleum usually is associated with waters containing much Ca, Cl, B, Sr, Ra, Br, and I, and a subnormal amount of SO_4''. Waters from the carboniferous strata of Tartar Republic belong to this group J. J. B

CH

14

Mineral waters of Dzhermuk (Isti-Su) in Armenia. N. V. Tagreva. *Trudy Lab. Gidrogeol. Problem im. F. P. Savarenskogo, Akad. Nauk S.S.S.R.* 4, 212-39(1948). The Dzhermuk spa is in the southeastern part of Armenia, 12 km. from the border, Isti-Su being across the border in Azerbaijan. These thermal springs (temp. 52.7-71°), like the famous Karlsbad "Sprudel," spontaneously evolve gases, 99.8% CO_2 but contg. rare gases (0.007% A, 0.001% He by vol.), while the gas issuing from the ground near spring No. 9 contains only 98.8% CO_2 with 0.023% A and 0.001% He. These thermal waters are furthermore of interest because of their F (2.07-2.21 × 10^{-3} g. per l.), B (5.11 × 10^{-4} to 9.71 × 10^{-4} g. per l.), and I (1.0 × 10^{-4} to 3.3 × 10^{-4} g. per l.) contents. The F, B, and I contents of 10 other published analyses of mineral waters are listed. B was detd. in 50-100 ml. of water by colorimetric titration according to Foote (*C.A.* 26, 1390) as modified by T. (*C.A.* 30, 3553). F was detd. by colorimetric titration with zirconium-alizarin according to de Boer and Bassart (*C.A.* 20, 2120) as modified by Shvedov (*C.A.* 31, 7155; *C.A.* 33, 1580) with previous pptn. of sulfates; as a check the method of Willard and Winter (*C.A.* 27, 681) was used, and this method is recommended as the best for detg. F in mineral waters. Iodine was detd. by T.'s method, with 500 ml. of water; iodide was first oxidized to iodate by use of permanganate and then titrated iodometrically. There is urgent need of a method suitable for detg. Br and I in mineral waters. If B is assumed to be present as $B_4O_7^{--}$ ions the mean of the 14 analyses cited gives F^- = 5.98 and $B_4O_7^{--}$ = 5.77 mg.-ions per 100 g. of dry residue, which T. believes indicates that F and B unite into one group characteristic of alk. carbonate waters generated under conditions of recent volcanism.

V. H. Gottschalk

BELAYA, M.P.; TAGEEVA, N.V.

Elementary chemical composition of wheat of pure lines of descent.
Trudy Biogeokhim. Lab., Akad. Nauk S.S.S.R., No.9, 137-46 '49.
(CA 47 no.15:7603 '53) (MLRA 6:5)

TAGEEVA, N.V.

The problem of the geochemical conditions of formation of some sedimentary rocks. N. V. Tageeva. *Doklady Akad. Nauk S.S.S.R.* 78, 535-8(1951).—Geochem. processes (purely chem., colloidal, biochem., radiochem.) are especially important for explanation of the formation of certain types of sedimentary rocks and water occurring below petroleum layers, and also for explanation of the origin of petroleum and hydrocarbon gases. Accompanying the report is a chart listing some fundamental geochem. characteristics of formation of some sea-coastal sedimentary rock.
Gladys S. Macy

[illegible]

[illegible]

[illegible]

9. Monthly List of Russian Accessions, Library of Congress, [illegible] 1952 ~~1953~~ Unclassified.

TAGEYEVA, N.V.; TIKHOMIROVA, M.M.

Geochemistry of the natural waters of the Uzboy region. Doklady Akad. Nauk S.S.S.R. 84, 1201-2 '52. (MLRA 5:7)
(CA 47 no.22:12705 '53)

TAGEYEVA, N.V.

Some geochemical types of subterranean water. N. V. Tageeva. *Izvest. Akad. Nauk S.S.S.R., Ser. Geol.* 1954, No. 1, 60–70.—A consideration is given of the following widely distributed geochem. types of subterranean waters: (1) brines from sea sedimentation, (2) mixed water occurring below petroleum layers, and (3) mineralized waters of arid regions.
Gladys S. Macy.

TAGEYEVA, N.V.

Geochemical and geological conditions for petroleum development and pool formation. Geokhim.met.poisk.nefti i gaza no.2:124-141 '54. (MLRA 9:10)

(Petroleum geology)

TAGEEVA, N.V.

62

Geochemistry of the magnesium-sodium chloride waters. N. V. Tageeva and M. M. Tikhomireva. *Doklady Akad. Nauk S.S.S.R.* 96, 121–4(1954).—Equil. of the reactions of the type 2NaCl (soln.) + Mg (in country rocks) ⇌ $MgCl_2$ + Na (in the mineral constituents of colloidal country rocks) have been often discussed to explain the Mg^{2+} content of the ocean water. Exptl. studies of the authors on the nature of underground waters demonstrated that the reaction mentioned above is not the most important; they observed (1) an exchange of Na^+ and Ca^{2+} in chloride solns. in colloid surface rocks, followed by the reaction $CaCl_2$ + $Mg(SO(HCO_3)_3)$ ⇌ $MgCl_2$ + $Ca(SO_4(HCO_3)_3)$, with pptn. of calcite and $CaSO_4$. This reaction is characteristic for arid climates, e.g. in the basin of the Caspian Sea, or in the desert of Kara-Kumy. (2) First the equil. of base exchange of Ca sulfate or carbonate with Na-enriched marine sediments, forming Na_2SO_4 and carbonate solutions which react in a second stage with $CaCl_2$ to ppt. $CaSO_4$ and calcite; Ca^{2+} thus disappears from the solns., while Mg^{2+} from residual/marine brines persists in the waters of the Mg/Na chloride type. Residual brines as mentioned are frequent in the Russian platform in the wide fields between the Ural and the Carpathian Mts. The geochem. coeff. of those waters is the ratio $Mg(SO_4(HCO_3)_3)$/$MgCl_2$. The base exchange of sea water with sediments of the continents is especially a Na^+ ⇌ Ca^{2+} exchange, and the reaction $CaCl_2$ + $MgSO_4$ ⇌ $MgCl_2$ + $CaSO_4$ takes place. The geochem. coefficient is in normal sea water = 0.56, but much higher in sea water basins surrounded by continents, e.g. = 15.22 for the water of the Caspian Sea. Lake Aral has a sulfatic-sodic compn. type. V. Eitel

USSR/Cosmochemistry - Geochemistry. Hydrochemistry, [illegible]

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, [illegible]

Author: Tageyeva, N. V.

Institution: None

Title: Experimental Investigations on Study of the Origin of Blanket Deposits of Sodium-Alkaline Earth Oil-field Brines

Original Periodical: Sb. Vopr. izucheniya podzem. vod i [illegible]. protsessov, M., AN SSSR, 1955, 93-121

Abstract: On the basis of numerous experiments it was noted that in the origin of water layers play part cathionic exchange between Na of brine and Ca^{2+} of clayey rock colloids; microbial geol reduction of sulfates with formation of H_2S and CO_3^{2-} ions; Mg^{2+} practically takes no part in the exchange; chemical interaction between brine and petroleum is absent in an aerobic medium. The author considers that alkaline earth-sodium chloride containing sulfate free waters together with petroleum can be formed in clayey rocks by interaction with sea water during period of accumulation of sediments.

Card 1/1

TAGEYEVA, N.V.

Principal features of the hydrogeochemistry of sedimentary rocks. Gidrokhim. mat.24:86-89 '55. (MLRA 9:4)

1.Laboratoriya gidrogeologicheskikh problem imeni F.P.Savarenskogo, Moskva.
(Water, Underground) (Water--Analysis)

TAGEYEVA, N.V.; TIKHOMIROVA, M.M.

Certain features in the early diagenesis of sedimentary rocks in the northwestern regions of the Black Sea. Dokl. AN SSSR 112 no.3:513-515 Ja '57. (MLRA 10:4)

1. Laboratoriya gidrogeologicheskikh problem im. F.P. Savarenskogo Akademii nauk SSSR. Predstavleno akademikom D.I. Shcherbakovym.
(Black Sea region--Rocks, Sedimentary)

TAGEYEVA, N. V.

"On the Geochemistry of Clay Sediments of the Caspian Sea."

report presented at the rth Intl. Sedimentology Congress, Geneva/Lausanne 2-7 June 1958.

TAGEYEVA, N.V.

AUTHOR: None given SOV/5-58-5-12/20

TITLE: The Hydrogeological Section (Gidrogeologicheskaya sektsiya)

PERIODICAL: Byulleten' Moskovskogo obshchestva ispytateley prirody, Otdel geologicheskiy, 1958, Nr 5, pp 151 - 155 (USSR)

ABSTRACT: The Hydrogeological Section of the Society, (Chairman- O.K. Lange, Secretary - N.F. Lobanova) heard the following reports. On 10 April 1958, by A.S. Dubil'yer, "The Question of Hydrochemical Zonality of Upper-Permian Deposits in the South Ural Region", and "The Borate Waters of the Trans-Emba channels by G.V. Tsytsarin. The following persons took part in the discussions: A.A. Aleksin, A.F. Yakushova, B.F. Mavritskiy, S.V. Viktorov, N.F. Lobanova, K.A. Ksenofontova and O.K. Lange. On 17 April 1958, by B.L. Lichkov, "Erosive Surfaces of Mountains, the Structure of Mountains and Hydrogeology", and by V.S. Samarin "The Geomorphology and the Hydrogeologic Map". The following persons took part in these discussions: N.I. Skolov, N.V. Dumitrashko, M.A. Veviorovskaya, A.A. Konoplyantsev, A.S. Dubil'yer, K.V. Filatov, A.A. Brodskiy, V.B. Neyman. On May 15, by K.V. Filatov "The Basic Rules of the Hydrochemical Composi-

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tion of Subterranean Waters of the Altay, and some Considerations on the Problem of Their Genesis", and by L.M. Gudochkina, "The Engineering and Geological Characteristics of Rocks from the Alma-Ata Region". The following persons took part in the discussions: Ye.N. Yartseva, V.N. Popov, A.G. Zavidonova, N.F. Lobanova, Yu. V. Mukhin, D.S. Sokolov and O.K. Lange. On May 22, by N.V. Tageyeva, "The Geochemistry of Pore Waters from Quaternary and Pliocene Sediments of the Caspian Sea", and by Ch.Ye. Krol', "The Geochemistry of Pore Solutions of Carboniferous Deposits of the Moscow Oblast'". The following persons took part in the discussions: V.N. Popov, A.A. Gavryukhina, G.L. Stadnikov, V.F. Bel'skaya, Ch. Ye. Krol', A.G. Zavidonova and O.K. Lange. On May 29 1958, the reports were made by A.I. Silin-Bekchurin, "Some Problems of Hydrogeology in North Africa and Hindustan" and by A.G. Zavidonova "The Devonian Waters of

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the Tambov Oblast'"). The following persons took part in the discussions: Yu.M. Mukhin, A.G. Zavidonova, M.A. Veviorovskaya, A.S. Dubil'yer, O.K. Lange and A.I. Silin-Bekchurin.

AUTHOR: Tageyeva, N.V.

SOV/5-58-5-17/20

TITLE: On the Geochemistry of Pore Waters from Quaternary and Pliocene Sediments of the Caspian Sea (K geokhimii porovykh vod iz chetvertichnykh i pliotsenovykh osadkov Kaspiyskogo morya)

PERIODICAL: Byulleten' Moskovskogo obshchestva ispytateley prirody, Otdel geologicheskiy, 1958, Nr 5, pp 157 - 158 (USSR)

ABSTRACT: The author sums up the report she read on 22 May, 1958 in the Hydrogeological Section of the Society. She describes the chemical content of waters taken from Quaternary and Pliocene sedimentary layers 4 to 58 m deep, from the sea bottom. The study of water migration in these layers showed that their normal humidity decreases with the age of the layers, independently of the depth at which these layers are. The chemical composition of the pore water is also given.

Card 1/1

TAGEYEVA, N.V.

Principal geochemical types of underground waters. Trudy Lab. gidrogeol.probl. 16:106-114 '58. (MIRA 12:2)

1. Laboratoriya gidrogeologicheskikh problem imeni F.P. Savarenskogo AN SSSR.
(Water, Underground--Composition)

TIKHOMIROVA, M.M.; TAGIYEVA, N.V.

Experimental geochemical study of the formation of types of underground waters. Trudy Lab.gidrogeol.probl. 16:261-284 '58. (MIRA 12:2)

1. Laboratoriya gidrogeologicheskikh problem imeni F.P. Savarenskogo AN SSSR.

(Water, Underground)

TAGEYEVA, N.V., referent

Geochemistry of interstitial waters in Caspian Quaternary and Pliocene sediments. Biul.MOIP. Otd.geol. 33 no.5:157-158 S-O '58. (MIRA 12:1)

(Caspian Sea---Sediments (Geology))

SOV/20-121-6-30/45

AUTHOR: Tageyeva, N.V.

TITLE: On the Geochemistry of the Loamy Sediments of the Caspian Sea (O geokhimii glinistykh osadkov Kaspiyskogo morya)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 121, Nr 6, pp 1056 - 1059 (USSR)

ABSTRACT: It is very important to investigate the interstitial water of the marine sediments although at the moment mainly the mineralogical part is used for the investigation of the chemical metamorphism of these deposits. Since 1954 the author has been investigating together with M.M. Tikhomirova and V.V. Korunova in the Laboratory for Hydrogeological Problems the sediments of the shelf of the Caspian and Black Sea from the Eogene and Pliocene time. Apparently these deposits did not dry out. In order to be able to investigate the interstitial water the sediments were squeezed out under a pressure of 150 kg/cm^2; this procedure was carried out according to Kryukov (Ref 1). Table 1 shows the results of the semi-microanalysis and spectrum analysis of the sediments of the Makarov-bank, of the "Pogorelaya plita"-bank and of the Baku archipelago (Bakinskiy arkhipelag). In order to be able to compare the interstitial water with the water of the

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On the Geochemistry of the Loamy Sediments of the Caspian Sea

Caspian Sea the chemical composition of the latter is mentioned. It reveals that the investigated stratigraphic column which corresponds to a period of 1 000 000 years is represented by a rather monotonous mass of loam. It mainly consists of hydromica; its particles have a size of 3,6 - 5μ. $CaCO_3$ forms 22 - 30 %, C_{org} forms 0,8 - 1, 7 %. Table 1 shows that in the Quartenary sediments of the Caspian Sea magnesia forms the main exchange cation. Thus may be concluded that magnesia played an important part in the geochemistry of the Quartenary waters; this is also the case in the recent water of the Caspian Sea. In Pliocene deposits the absorbed amount of magnesia decreases rapidly. Its part is taken over by natrium and potassium which together become prevailing. This distribution of the mentioned cations is brought about by the formation of an authigenous needle-shaped magnesia alumosilicate in it (probably from the group of palygorskite) which was determined by means of an electron microscope by D.D. Kotel'nikov. Table 2 shows the elements which are distributed in the interstitial water: Br, Sr, B, Si, Al, Fe,

On the Geochemistry of the Loamy Sediments of the Caspian Sea

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Mn, Ti and Cu are characteristic of this water with Br and Sr forming the largest amount. Table 3 shows the ratio $\frac{Cl}{Br}$, $\frac{Cl}{B}$ and $\frac{Cl}{Sr}$ in interstitial and recent water. The author claims that the not open water where the mentioned sediments were deposited was similar to the water of the Caspian Sea. There are 3 tables and 5 references, 4 of which are Soviet.

ASSOCIATION: Laboratoriya gidrogeologicheskikh problem im.F.P. Savarenskogo Akademii nauk SSSR (Laboratory for Hydrogeological Problems imeni F.P. Savarenskiy, Academy of Sciences, USSR)

PRESENTED: March 8, 1958, by D.I. Shcherbakov, Member, AS USSR

SUBMITTED: February 24, 1958

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PHASE I BOOK EXPLOITATION SOV/5331

International Geological Congress. 21st, Copenhagen, 1960.

Morskaya geologiya (Marine Geology) Moscow, Izd-vo AN SSSR, 1960. 205 p. 2,500 copies printed. (Series: Doklady sovetskikh geologov, problema 10)

Editorial Board: P. L. Barsukov, Resp. Ed.; A. V. Zhivago, V. P. Zenkovich and O. D. Udintsev; Ed. of Publishing House: V. S. Sheynman; Tech. Ed.: V. Karpov.

PURPOSE: This book is intended for geologists and oceanographers.

COVERAGE: The book contains 18 articles representing the reports given by Soviet geologists at the 21st International Geological Congress. Individual articles deal with the bottom topography, sedimentation, and tectonics of oceans (Western Pacific and Southern Indian), as well as the geomorphology and tectonics of the Black and Caspian Seas and Soviet sectors of the Arctic. An English résumé accompanies each article. No personalities

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(22)

TAGEYEVA, N.V.; TIKHOMIROVA, M.M.

Determining the composition of exchange cations in sediments of the Caspian Sea. Trudy Lab. gidrogeol. probl. 30:48-56 '60.
(MIRA 14:4)

(Caspian Sea--Cations)

TAGEYEVA, N.V.

Water in marine sediments at the time of their diagenesis. Dokl. AN SSSR 134 no.4:917-919 O '60. (MIRA 13:9)

1. Laboratoriya gidrogeologicheskikh problem im. F.P. Savarenskogo Akademii nauk SSSR. Predstavleno akad. D.I. Shcherbakovym.
(Submarine geology)

S/169/62/000/010/054/071
D228/D307

AUTHORS: Tageyeva, N.V., Tikhomirova, M.M. and Korunova, V.V.

TITLE: Water during the diagenesis of marine sediments (in the example of the northern seas)

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 10, 1962, 7, abstract 10V61 (In collection: Sovrem. osadki morey i okeanov, M., AN SSSR, 1961, 577-596)

TEXT: Data on the chemical composition of bottom sediments and the muddy (interstitial) waters held in them are given for the Central Arctic basin of the Barents, Kara, Chukotsk and Bering Seas. In comparison with ocean water these latter are enriched in I by 150-200 times, in Zn by 10-15 times, and in Cu, B, K and Br (only by 10-20%). There is a tendency for the concentration of I and B to grow in muddy water, and for that of Zn to diminish, as the pH increases.
[Abstracter's note: Complete translation]

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TAGEYEVA, N.V.

Natural moisture content and other properties of sediments of the Caspian Sea and its predecessor basins. Trudy Lab. gidrogeol. probl. 36:65-83 '61. (MIRA 14:11)
(Caspian Sea--Sediments (Geology))

TAGEYEVA, Nadezhda Viktorovna; TIKHONOVA, Mariya Matveyevna; TEODOROVICH, G.I., doktor geol.-min. nauk, otv. red.; FILIPPOVA, B.S., red. izd-va; PRUSAKOVA, T.A., tekhn. red.

[Geochemistry of interstitial waters in the diagenesis of marine sediments; as revealed by the study of sediments in the Caspian Sea] Geokhimiia porovykh vod pri diageneze morskikh osadkov; na primere osadkov Kaspiiskogo moria. Moskva, Izd-vo Akad. nauk SSSR, 1962. 244 p. (MIRA 15:7)
(Caspian Sea--Deep-sea deposits)

TAGEYEVA, N.V.

Hydrogeochemical cycle of sedimentary rocks. Biul. MOIP. Otd.geol. 37 no.4:144-145 Jl-Ag '63. (MIRA 16:5)
(Rocks, Sedimentary)

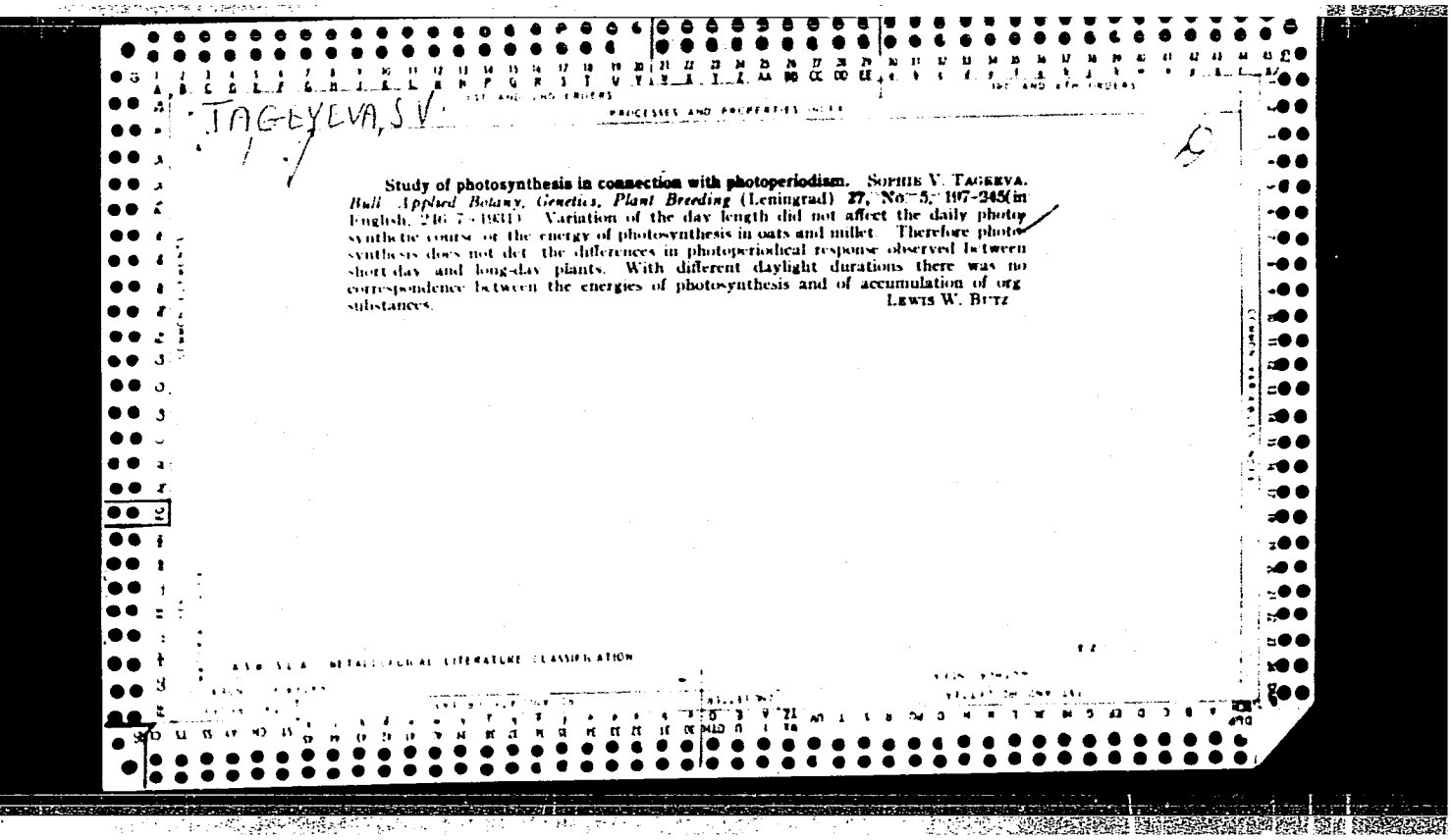
TAGEYEVA, N.V., doktor geol.-mineral.nauk (Moskva)

Sea bottom silt. Priroda 52 no.3:98-100 '63. (MIRA 16:4)
(Silt) (Submarine geology)

TAGEYEVA, N.V.

Interstitial waters in the sediments of the northern seas. Dokl. AN SSSR 163 no.6:1477-1479 Ag '65. (MIRA 18:8)

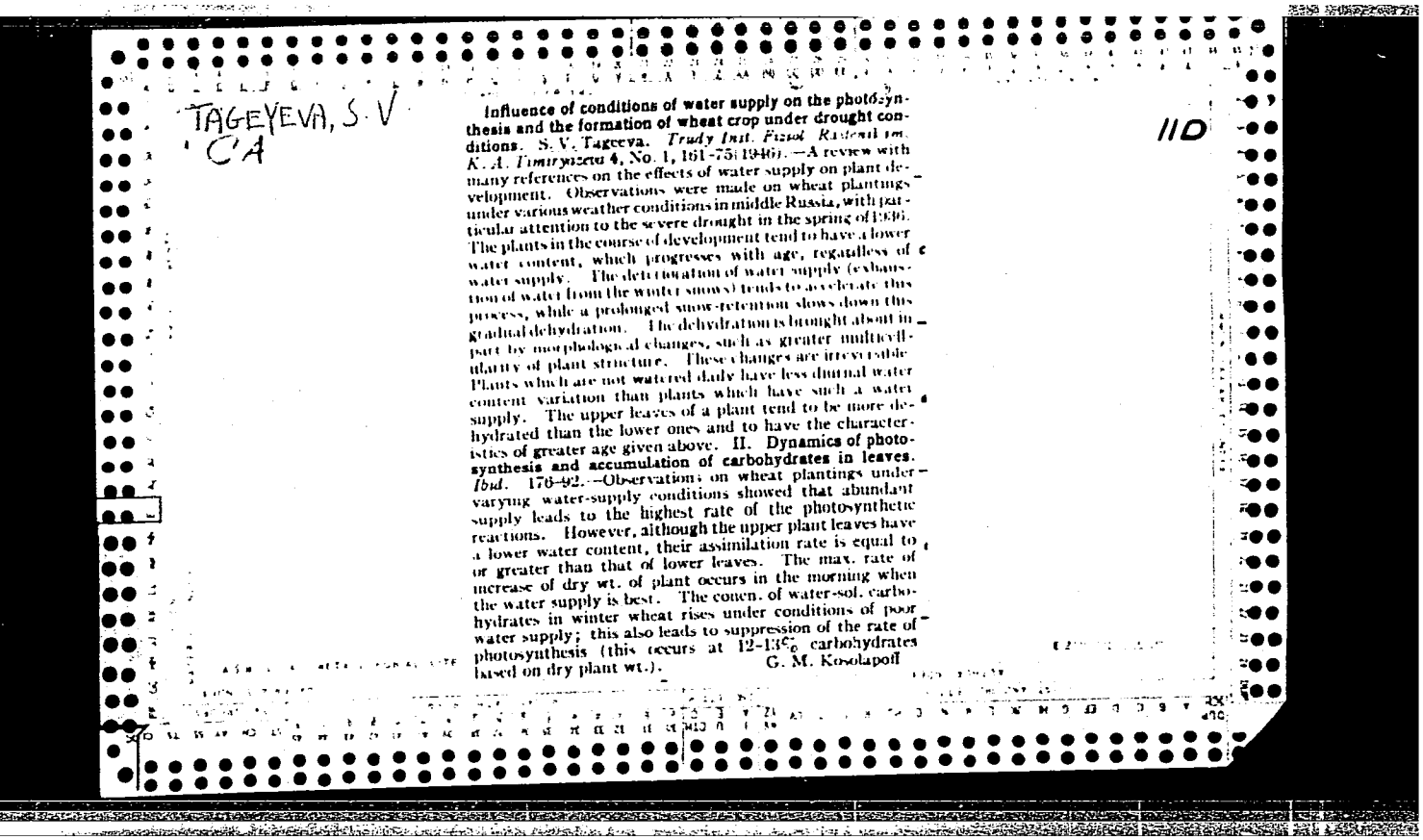
1. Submitted January 20, 1965.



TAGEYEVA, S V.

Study of photosynthesis in connection with photoperiodism. SOPHIE V. TAGEEVA. *Bull. Applied Botany, Genetics, Plant Breeding* (Leningrad) **27**, No. 5, 197–245 (in English, 216–7; 1931). Variation of the day length did not affect the daily photosynthetic course of the energy of photosynthesis in oats and millet. Therefore photosynthesis does not det. the differences in photoperiodical response observed between short-day and long-day plants. With different daylight durations there was no correspondence between the energies of photosynthesis and of accumulation of org. substances.

LEWIS W. BUTZ



TAGEYEVA, S. V.
CA

Influence of conditions of water supply on the photosynthesis and the formation of wheat crop under drought conditions. S. V. Tageeva. *Trudy Inst. Fiziol. Rastenii im. K. A. Timiryazeva* 4, No. 1, 161–75 (1946).—A review with many references on the effects of water supply on plant development. Observations were made on wheat plantings under various weather conditions in middle Russia, with particular attention to the severe drought in the spring of 1936. The plants in the course of development tend to have a lower water content, which progresses with age, regardless of water supply. The deterioration of water supply (exhaustion of water from the winter snows) tends to accelerate this process, while a prolonged snow-retention slows down this gradual dehydration. The dehydration is brought about in part by morphological changes, such as greater multicellularity of plant structure. These changes are irreversible. Plants which are not watered daily have less diurnal water content variation than plants which have such a water supply. The upper leaves of a plant tend to be more dehydrated than the lower ones and to have the characteristics of greater age given above. II. **Dynamics of photosynthesis and accumulation of carbohydrates in leaves.** *Ibid.* 176–92.—Observations on wheat plantings under varying water-supply conditions showed that abundant supply leads to the highest rate of the photosynthetic reactions. However, although the upper plant leaves have a lower water content, their assimilation rate is equal to or greater than that of lower leaves. The max. rate of increase of dry wt. of plant occurs in the morning when the water supply is best. The concn. of water-sol. carbohydrates in winter wheat rises under conditions of poor water supply; this also leads to suppression of the rate of photosynthesis (this occurs at 12–13% carbohydrates based on dry plant wt.).

G. M. Kosolapoff

IID

USSR/Medicine - Plants Jun 48
Medicine - Water, Supply

"Effect of Growth Substance on the Absorption and Expiration of Water by the Plant Fibers," S. V. Tageyeva, V. L. Brovtsyna, Inst Plant Physiol imeni K. A. Timiryazev, Acad Sci USSR, 4 pp

"Dok Ak Nauk SSSR" Vol LX, No 9

Experiments were carried out on beans (Vicia faba) growing in earthenware pots. Soil was 70% saturated. Growth substances used were beta-indolylacetic acid (heteroauxin) and 2,4-dichlorphenoxyacetic acid. Most important results are tabulated and discussed.

6/49T49

USSR/Medicine - Plants (Contd) Jun 48

Data shows that growth substances increase water content of leaves. Submitted 28 Apr 48.

6/49T49

BRANDT, A.B.; DEREVYANKO, V.G.; PAVLOVA, I.P.; TAGEYEVA, S.V.

Significance of the intensity and spectral composition of light for pigment accumulation in plants [with summary in English]. Biofizika 2 no.6:649-660 '57. (MIRA 10:12)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.
(Plants, Effect of light on) (Color of plants)

TAGEEVA

TAGEEVA, S.V.

"Peculiarities of the Motion and Viscosity of the Protoplasm of Vegetative Cell." Paper submitted for the Int'l Botanical Congress, Montreal, Canada, 19-29 Aug 1959.

Inst. of Biophysics, Academy of Sciences U.S.S.R., Moscow.

TAGEYEVA, S.V.; BRANDT, A.B.

Universal apparatus for determining optical properties of plants.
Biofizika 4 no.2:232-237 '59. (MIRA 12:4)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.
(PLANTS,
universal device for determ. of optic properties (Rus))

TAGAYEVA, S. V., BRANDT, A. B., DEREVYANKO, V. G. Inst. of Biophysics, Academy of Sciences, Moscow.

"The peculiarities of the leaves' optical properties."

paper submitted for the Third Intl. Congress on Photobiology, Copenhagen, 31 July - 5 August 1960.

TAGEYEVA, S. V., DUBROV, A. P. Inst. of Biophysics, Academy of Sciences, Moscow.

"Photoreactivation in Plant Cells."

paper submitted for the Third Intl. Congress on Photobiology, Copenhagen, 31 July - 5 August 1960.

TAGEEVA, S. V., BRANDT, A. B. Inst. of Biophysics, Academy of Sci., Moscow.

"Optical properties of leaves depending on the angle of light incidence."

paper submitted for the Third Intl. Congress on Photobiology, Copenhagen, 31 July - 5 August 1960.

TAGEYEVA, S.V.; BRANDT, A.B.

Studying optical properties of leaves as related to the angle of incidence of light. Biofizika 5 no.3:308-317 '60. (MIRA 13:7)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.
(LEAVES--OPTICAL PROPERTIES)

TAGEYEVA, S.V.; BRANDT, A.B.; DEMYANKO, V.G.

Variations in the optical properties of leaves during vegetation. Dokl. AN SSSR 135 no.5:1270-1273 D '60. (MIRA 13:12)

1. Institut biologicheskoy fiziki AN SSSR. Predstavleno akademikom A.I.Oparinym.

(Leaves--Optical properties) (Birch) (Linden)

TAGEYEVA, S.V.; BRANDT, A.B.; KORSHUNOVA, V.S.

Optical properties of Chlorella pyrenoidosa suspensions. (MIRA 15:3)
Biofizika 6 no.5:572-581 '61.

1. Institut biologicheskoy fiziki AN SSSR, Moskva.
(ALGAE)
(SPECTRUM ANALYSIS)

TAGEYEVA, S.V.; KAZANTSEV, E.N.

Characteristics of cytoplasmic and chloplastic streaming in the leaf cells of Elodea canadensis. Izv.AN SSSR.Ser.biol. no.6:885-895 N-D '62. (MIRA 16:1)

1. Institute of Biological Physics, Academy of Sciences of U.S.S.R.
(PLANT CELLS AND TISSUES) (WATERWEED)